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use, operation, and setting of the slide-valve and independent cut-off, followed by a discussion of the various forms of valve-gears, and of automatic cut-off and throttling engines. A chapter treating of compound and triple and quadruple expansion engines comes next, after which condensers, pumps, and pumping-engines are considered. Next is given a chapter on the miscellaneous attachments and minor details of an engine, embracing stop-valves, throttle-valves, and relief-valves, stuffing-boxes, belting, lubricators, etc., followed by a chapter on the management of engines and pumps, engine trials, and dynamometers.

When the subject of boilers is reached, a chapter is devoted to the theory of combustion and the various types of boilers in use, and another to their constructive details and strength. The concluding chapter of the book treats of the appendages and accessories of boilers, their decay, management, etc.

At first blush, after a hasty glance through the pages of this bulky volume, the price of it would seem too great; but, after a careful examination, that impression disappears. True, the material from which the author evolved the work was abundant and ready to hand, but the illustrations alone (and they are many) "came easy." The labor of working over the material, — putting it "into perspective," as it were, effectively, discriminately, and judiciously, — and welding the whole together into a book suitable alike to the needs of the student, the engineer, and the miscellaneous seeker for information, must have been enormous.

That the work is well done is certified to by the reputation of both author and publisher.

AMONG THE PUBLISHERS.

THE Forest and Stream Publishing Company announce a new and enlarged edition of "Fly-Fishing and Fly-Making for Trout," by J. Harrington Keene. The book has as illustrations actual specimens of the silk, feathers, and other materials used in fly-making.

— A "Flora of Palestine" is in progress, edited by the Rev. G. E. Post, and is now completed as far as the end of the order *Umbelliferae*. Several new species are described.

— Among the contents of the *New England Magazine* for March, we note "The Early History of Electricity in America," by George Herbert Stockbridge; "Window-Gardening," by Mrs. Henrietta L. T. Wolcott; "The Indian-Corn as our National Plant," by Sarah Freeman Clarke; "The Problem of the Unemployed," by William M. Salter; and "The History of Historical Writing in America," III., by J. F. Jameson, Ph. D.

— Messrs. Ginn & Co. announce "The Industrial Primary Arithmetic," by James Baldwin, Ph. D., to be published in April. This work possesses many features which distinguish it from others of its class. Theory gives place to practice. The pupils

Publications received at Editor's Office,
Feb. 23—March 7.

ALABAMA Geological Survey. Report on the Cahaba Coal Field, by Joseph Squire, M.E., with Appendix on the Geology of the Valley Regions Adjacent to the Cahaba Field, by Eugene A. Smith. Montgomery, Ala., State. 189 p. 8°.

AUSTEN, W. C. R. An Introduction to the Study of Metallurgy. London, Charles Griffin & Co.; Philadelphia, Lippincott. 292 p. 12°.

BALL, R. S. Time and Tide, A Romance of the Moon. New York, E. & J. B. Young. 188 p. 16°. \$1.

CARUS, P. The Soul of Man: An Investigation of the Facts of Physiological and Experimental Psychology. Chicago, Open Court Publ. Co. 458 p. 12°. \$3.

DARWIN, C. On the Structure and Distribution of Coral Reefs, with an Introduction by Joseph W. Williams. New York, A. Lovell & Co. 278 p. 12°.

DIETZ, W. D. The Soldier's First Aid Handbook. New York, Wiley. 93 p. 16°. \$1.25.

GAGE, A. P. Physical Laboratory Manual and Note Book. Boston, Ginn. 121 p. 12°. 45 cents.

GREEN, A. H. The Birth and Growth of Worlds. New York, E. & J. B. Young & Co. 61 p. 16°. 40 cents.

KINGS' Jester, The. Vol. I., No. 1. March, 1891. m. New York, Herbert Booth King & Brother. 16 p. 4°. \$1 per year.

LOCK, J. B. Arithmetic for Schools. American edition. London and New York, Macmillan. 338 p. 16°. 70 cents.

MERCURY, The. Vol. I., No. 1. w. Halifax, N.S., Dunn Publ. Co. 8 p. 1°. \$2 per year.

MORGAN, C. L. Animal Life and Intelligence. Boston, Ginn. 512 p. 8°. \$4.

PERRY, J. Spinning Tops. The "Operatives' Lecture" of the British Association Meeting at Leeds, 6th September, 1890. New York, E. & J. B. Young. 136 p. 16°. \$1.

TIDY, C. M. The Story of a Tinder-Box. New York, E. & J. B. Young & Co. 105 p. 16°. 80 cents.

U. S. NAVAL ACADEMY, Annapolis, Md., Annual Register of the, 1890-91. Washington, Government. 84 p. 8°.

WARD, H. M. Diseases of Plants. New York, E. & J. B. Young. 196 p. 16°. \$1.

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— The March *Magazine of American History* opens with a study of the public career of Gen. Francis E. Spinner the financier, by Rev. Isaac S. Hartley, D.D. The paper includes a description of Gen. Spinner's part in the conception and issue of the "greenbacks." The second article is a story, by Hubert Howe Bancroft, of his varied experiences in bringing out his first book, describing his literary pilgrimage from California to visit the notable authors of Boston and New York. In the third paper we have a sketch, with portrait, of Rev. Samuel M. Isaacs, written by his son Abram S. Isaacs, Ph.D. Following this, Mr. A. W. Clason of Virginia contributes an account of the Pennsylvania Convention, 1788. The next is a paper from the pen of Hon. Charles K. Tuckerman of

Florence, Italy, entitled "An Hour with George Bancroft," in which he describes his last visit to the great historian; then comes a sonnet on the same theme, "George Bancroft, 1800-91," by William C. Richards. An article that will interest a large class of readers in all parts of the country is "Slavery in Canada," by J. C. Hamilton, LL.B. "The Homespun Age," a chapter by M. C. Williams, relates to early settlements in the interior valleys of Tennessee. "The Hunters of Kentucky," an old song, composed just after the battle of New Orleans, from W. Abbott; the description of the frontispiece by the editor; and "Washington at Tarrytown in 1783," by M. D. Raymond,— complete the principal features of the issue.

— Under the title "Hints to Power Users," Mr. Robert Grimshaw, whose "Catechisms of the Steam Engine, Pump, and Boiler," and other practical works, have proved so popular, has prepared some non-technical advice to the men who pay the bills. It is issued by the Cassell Publishing Company, New York City.

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